HAITI HURRICANE GEORGES RECOVERY PROGRAM

Monitoring and Evaluation

FINAL IMPACT SURVEY

***Submitted to*:**
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Table of Contents

List of Tables and Figures

ACRONYMS

CDRH	Centre de Developpement des Ressources Humaines
CECI	Centre Canadien d'Etudes et Cooperation Internationale
CHF	Cooperative Housing Foundation
CIAT	Centro International de Agricultura Tropical
CRS	Catholic Relief Service
CRSP	Collaborative Research Support Program
EG	Economic Growth Office (USAID/Haiti)
FAVA/CA	Florida Association of Voluntary Agencies for Caribbean Action
GDP	Growth Domestic Product
GPS	Global Positioning System
HGRP	Hurricane Georges Recovery Program
M&E	Monitoring and Evaluation
MEG	Monitoring & Evaluation Group (USAID/Haiti)
ORE	Organization for the Rehabilitation of the Environment
PADF	Pan American Development Foundation
PMP	Performance Monitoring Plan
R4	Results, Review and Resources Request
SECID	South-East Consortium for International Development
SPSS	Statistical Package for the Social Sciences
USAID	United States Agency for International Development
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
US FEMA	Federal Emergency Management Agency

EXECUTIVE SUMMARY

Hurricane Georges struck Haiti in September 1998, sweeping across the country from the central area to the northwest damaging millions of dollars worth of crops, infrastructure and housing in its path. In addition, the constant heavy rains created severe flooding in the southeast and southwest regions that caused direct damage to schools, agricultural sector infrastructure and inputs, and drinking water and sanitation facilities. Estimates of total economic losses ranged beyond $180 million, equivalent to 5% of Haiti's Gross Domestic Product (GDP).

The Hurricane Georges Recovery Program (HGRP) is USAID/Haiti's longer-term response to the damage caused by Hurricane Georges in Haiti. It was designed to help communities recover from the impact of Hurricane Georges and reduce their vulnerability to future natural disasters. Pan American Development Foundation (PADF) is the lead HGRP implementing organization. Other partner organizations executing HGRP subprojects focusing on irrigation system rehabilitation, soil conservation, and the repair of potable water systems, schools and roads were: Catholic Relief Services (CRS), Plan International, Winrock International, Cooperative Housing Foundation (CHF) and Centre Canadien d'Etudes et de Coopération International (CECI). In addition, Organization for the Rehabilitation of the Environment (ORE), with assistance provided by Centro International de Agricultura Tropical (CIAT), increased its stock of improved basic and commercial seeds that were made available to HGRP participants at current market grain prices. Centre de Developpement des Ressources Humaines (CDRH), a Haitian organization specializing in community mobilization and training, helped increase local capacities to address disaster mitigation and preparedness. In addition, U.S. Army Corps of Engineeriers (USACE), U.S. Department of Agriculture (USDA), U.S. Federal Emergency Management Agency (US FEMA) and Florida Association of Voluntary Agencies for Caribbean Action (FAVA/CA) provided a variety of technical assistance to the HGRP and partner institutions.

To assess the program's impact, SECID used a longitudinal study design that collected information through field surveys of over 1,000 rural households three times during the life of the Hurricane Georges Recovery Program. In May 2000, a baseline survey was conducted to establish initial household indicator levels in potential HGRP-assisted communities. A mid-term impact household survey was carried out in November 2000 to measure the progression of selected indicators in HGRP-assisted communities. The final survey was conducted in October 2001. The surveys are an integral part of the Monitoring and Evaluation system used as a tool to measure progress towards achievement of selected HGRP indicators.

All three survey methodologies were designed on the premise that agro-ecological zones are the primary source of household variability. As in the mid-term survey, a total of 1,074 households located into 29 communities were surveyed in the final round and were divided as follows: 369 households in ten hillside zone communities; 140 households in four hillside control group communities; 455 households in twelve irrigated plain zone communities and 110 households in three irrigated plain control groups.

Results of HGRP selected indicators showed that the utilization rates of ORE improved seeds have increased in the HGRP assisted communities during the last two years. In fact, this final

impact survey found that 46% of the 822 households interviewed in HGRP-assisted communities knew about the ORE improved seeds and 19% indicated that they had used the seeds to increase their farm productivity. This indicates a big improvement when comparing this result to the mid-term impact survey where only 4% of the households in the assisted communities declared using ORE seed. From the year 1999 to the year 2001, an increase of 18% was observed in terms of households using improved seeds.

Results on disaster mitigation and preparedness are mixed. When considering the indicator definition as stated in the USAID Performance Monitoring Plan (PMP), 16% of the households were considered as households with increased awareness of disaster mitigation and preparedness. However, when the overall knowledge of the respondents are taken into consideration, 33% of the households can be considered as households with increased awareness of disaster mitigation and preparedness. More importantly, more and more people (91%) were able to identify at least one action that has to be taken in a case of a natural disaster. When asked if they felt better prepared for disasters, 34% of the communities now know that they can help themselves to be more resistant to the whims of nature and will take action both before and after a disastrous event.

Results of the SECID final impact survey indicated that gross average annual household revenue was 20,880.00 gourdes for the 824 households investigated in HGRP-assisted communities. Statistically, the true income average is between 18,461.00 gourdes and 22,709.00 gourdes, with a margin of error of 5%. This represents a significant increase in income when comparing the last and mid-term impact survey where the average income was 16,480.00 gourdes in the HGRP assisted area.

1.1 Survey Objective

SECID assisted USAID/Haiti and implementing organizations by providing Monitoring and Evaluation (M&E) services assessing Hurricane Georges Recovery Program (HGRP) impacts on beneficiary populations and documenting results. The purpose of SECID's contract with USAID was to serve as an independent, impartial party to provide valid and reliable M&E data as well as a final evaluation report to USAID/Haiti and its HGRP implementing partners. The principal activity is the collection, analysis and reporting of baseline, mid-term impact and final impact field survey data to measure progress towards achievement of selected HGRP objectives.

The SECID field surveys address the following indicators:
1. Number of communities more resilient to natural disasters;
2. Percentage of households using ORE improved seeds;
3. Percentage of households with increased awareness of disaster mitigation and preparedness;
4. Gross average annual household revenue.

1.2 Methodology

Longitudinal Study Design

To assess program's impact, SECID used a longitudinal study design that collected information three times during the life of the Hurricane Georges Recovery Program. These studies were integral parts of the Monitoring and Evaluation (M&E) system designed by SECID to measure HGRP progress.

In May 2000, SECID conducted a baseline survey to establish initial household indicator levels in potential HGRP assisted communities. The potential HGRP intervention area was broken down into three agro-ecological zones and each community was grouped into one of these zones according to topographic and irrigated water availability criteria. A total of 1,079 rural households randomly selected and located in two three different agro-ecological zones were surveyed during the baseline study.

In November 2000, a mid-term impact survey was carried out to measure the progression of selected indicators in HGRP-assisted communities. The HGRP intervention zone, as well as control group communities, was again stratified according to the same criteria mentioned above. Households in HGRP assisted communities and in community control groups were randomly selected and interviewed. These control group households were compared with households in HGRP assisted communities to get sense of change not due to factors external to the program while the overall mid-term impact results were also compared to the baseline data to help determine program impact over time.

This third and final field survey was conducted in October 2001, using 25 field agents and six vehicles. This work focused on the same sample of 1,074 households investigated at the time of the first impact survey. Nearby households not affected by HGRP interventions served again as control groups. The overall results from this third impact survey are now compared to both baseline data and the second or midterm impact surveys to determine the progression of selected indicators.

Sampling Method

The Survey Methodology is based on the premise that the primary source of household variability is the agro-ecological zone. As in the previous survey, 29 communities were selected within two agro-ecological zones established according to topographic and irrigated water availability criteria shown in Table 1.1. Twenty-two of these communities directly benefited from HGRP activities and seven did not. These seven communities served as the control group. A total of 1,074 households located in these 29 communities were surveyed. With the survey implementation plan designed for this purpose, it was preferable to survey the same households from the second impact survey in order to measure changes between surveys. Fortunately, only ten percent of the second survey households had to be replaced as the residents had moved. Therefore, data was collected from 90% of the initially targeted respondents. The results from this final impact survey can be then easily comparable with that of the mid-term impact survey for both of the studies are based on, statistically, the same sample. Table 1.2 shows the distribution of the final impact sample households by communities and agro-ecological zones.

Table 1.1: Agro-Ecological Stratification Criteria

Agro-Ecological Zone	Topography	Irrigated Water Availability?
1. Hillside	High elevation, mountainous terrain	No
2. Irrigated Plain	Low or moderate elevation, level terrain	Yes
3. Non-Irrigated Plain	Low or moderate elevation, level terrain	No

Most of the project intervention sites that served as the implementation area of the mid-term impact survey were soil conservation and irrigation activities and all were located in either hillside or irrigated plain zones. Therefore, no households in the non-irrigated plain zone were surveyed during the mid-term and final impact study. The households surveyed during the third and final impact study were divided as follows: 369 households in ten hillside zone communities and 140 households in four hillside control group communities; 455 households in twelve irrigated plain zone communities and 110 households in three irrigated plain control group communities. The households located in the hillside and irrigated plain control group communities were randomly selected in areas relatively near but not targeted by the HGRP. These control group households were compared with households in HGRP-assisted communities to help determine program impacts. However, the close location of the control groups with regard to the HGRP implementation area might limit their ability to be used effectively as

control group since activities like seed distribution and awareness of disaster mitigation can easily spread outside the targeted communities. The sample households were also classified by the head of household's gender. Following the random sampling method, 9% of households headed by women and 91% of households headed by men were surveyed. These results are shown in table 1.3 on page 12.

Unit of Analysis

As the previous surveys, the focus of this final field survey was on the households as the pertinent unit of analysis. A household is defined as "a unit of production and consumption, where the person in charge (head of household) and other members share the same roof and take meals together."

Survey instrument

SECID collected information about the selected HGRP indicators, which are:

- Number of communities more resilient to natural disasters;
- Percentage of households using ORE improved seeds;
- Percentage of households with increased awareness of disaster mitigation and preparedness
- Gross average annual household revenue

For the analysis needs, data were also collected on other socio-economics variables such as:

1. Households composition
2. Education
3. Agriculture and access to land
4. Livestock
5. Production and distribution

Table1.2: Household Sample Distribution by Community and Agro-Ecological Zone – Final Impact Survey

Agro-Ecological Zones							
Hillside Zone		**Hillside – Control Group**		**Irrigated Plain Zone**		**Irrigated Plain – Control Group**	
Community	**No. of Households**	**Community**	**No. of Households**	**Community**	**No. of Households**	**Community**	**No. of Households**
1. Charette	39	1. Pichon	36	11. Cajeun	37	5. Cachiman	35
2. Palmiste A Vin	36	2. La Porte	34	12. La Saline	36	6. Balan	37
3. Lafond	40	3. Ka Paul	32	13. Merceron	36	7. Boen	38
4. Mussac	36	4. Bassin Bleu	38	14. Despuzeau	36		
5. Bodarie	35			15. Lavanneau (bas)	35		
6. Mapou	38			16. Bercy	39		
7. Bel-air	37			17. Dory	39		
8. Macary	35			18. Oranger	36		
9. Bois d'Orme	36			19. Ka Mano/ ka David	38		
10. Fond'Oies	37			20. Cyvadier	42		
				21. Meyer	39		
				22. Tarvette	42		
TOTAL	**369**		**140**		**455**		**110**

Table 1.3: Heads of Households by Gender and Agro-Ecological Zone – Final Impact Survey

Gender	Agro-Ecological Zone								Total	
	Hillside		Hillside – Control Group		Irrigated Plain		Irrigated Plain – Control Group			
	No.	%	No.	%	No.	%	No.	%	No.	%
Women	32	9%	19	14%	38	8%	8	7%	97	9%
Men	337	91%	121	86%	417	92%	102	93%	977	91%
Total	**369**	**100**	**140**	**100**	**455**	**100**	**111**	**100**	**1,074**	**100**

Survey Implementation Methodology

The Interview Team consisted of a Coordinator, an Assistant-coordinator and four groups of surveyor teams. Each team comprised of a supervisor, a logistician and four investigators. As was done on previous surveys, an open meeting was held the first day of the survey in each community to explain to the community members the reasons for the survey. The team supervisor assisted by the survey coordinator directed the Creole discussions. The community meetings serve many functions: they were an occasion to introduce the survey team, identify the previous participants, randomly select 10 participants to replace targeted respondents not available at the time of the survey and finally set up times for the field interviews.

However, special attention was needed to ensure the success of the survey. We were aware that, on some occasions, interviewers would have to walk farther to locate certain interviewees and, as a result, would not be able to complete more than three questionnaires a day. Also, some people may not be able or willing to participate in the survey or may have moved to other localities to search for work. Taking these issues into consideration, SECID hired logisticians whose main task was to locate, contact and schedule, with the help of local guides, the people to be surveyed one day before the actual survey. The logistician set up a time for the interview and informed the surveyor team of that time. If for any reason, a specific candidate could not be found during the time frame set up for the survey in a given locality, the survey team moved to another locality with the possibility to come back to survey the candidate or a new one randomly selected at the community meetings. With this flexible procedure, the SECID teams were able to contact and survey 90% of the targeted respondents.

The interviewers or the supervisor filled out the household questionnaire forms during the interviews. Questions were addressed to the heads of the household, and the interviews took place in the presence of household members. No one from outside the household was allowed to attend the interview. All interviews were conducted in Creole so that all family members could understand the discussions. The average interview lasted approximately 90 minutes.

Each evening, the supervisor reassembled the survey group to review the day's work. Before the meeting, the supervisor examined and evaluated the day's questionnaires. If data on a questionnaire was judged to be incomplete, the supervisor instructed the interviewer concerned to return to the household to complete or verify the information. In this manner, both the quality of information gathered and the performance of the interviewers were closely monitored. In the same evening, the logistician coded all of the day's approved questionnaires using a codebook written for this purpose- this was done to expedite and facilitate the data entry phase. The supervisor also monitored the logistician's coordination efforts.

The coordinator or his assistant assured a second level of control after each locality had been surveyed by reviewing completed questionnaires. He followed up with supervisors should any discrepancies or inconsistencies be noted.

Data Analysis and Interpretation

The survey data was coded and entered into SPSS in SECID's office in Port-au-Prince for computer-assisted analysis. Descriptive analysis as well as inferential analysis were performed either to describe some of the sample characteristics or population parameters. For example, on key indicators such as "Seed utilization rate", "Percent of households with increased awareness and disaster mitigation" and "Gross average annual household revenue" data described in all samples were analyzed by agro-ecological zones. Data were also analyzed to compare results by assisted communities and non-assisted communities (control) to determine the true characteristics of the populations.

DEMOGRAPHICS AND SOCIO-ECONOMIC CHARACTERISTICS OF THE SAMPLE 2

This chapter discusses the structure of households in the sample, describing the human productive capacity in terms of household size, age, sex of the household members, education, land access and tenure, and land affectation.

2.1 Composition of Households by Community

As mentioned in the methodology section, this survey uses the household as the basic unit of analysis. It reports its findings in this document in terms of communities, organized into agroecological zones.

The overall average household size is 6.0 people. The household size varies from 4.7 to 6.8 between communities (Table 2.1). Households located in the communities like Cajeun, Charettes, La Saline, Despuzeau, Palmiste à Vin, Bercy, Dory, Bois d'Ormes, Cachiman, Ka Paul and Bassin Bleu have the lowest household size while those located at Merceron, Lafond,

Lavanneau, Mussac, Bodarie, Bel-Air, Oranger, Meyer, Pichon, Balan, Tavertes and La Porte have the highest household size.

Female headed households comprised 9% of the overall sample. Bassin Bleu, Cajeun, Ka Manno, Bois d'Ormes and Ka Paul represent communities where more than 15% of the households are headed by females.

Analyzing both figure 2.1 and table 2.1, an analyst can see that the age structure shows large population in young age groups and very small percentage in the old age group, mainly because of the high birth and mortality rates in Haitian rural areas. Mean ages for household head varies also by community. Household heads in Ka Paul are oldest while the household heads in Bel-Air are the youngest.

2.2 Education

Education levels are very low either in the Hillside or the Irrigated Plain as well as in the Hillside and the Irrigated Control Groups. Overall, only 26 % of the adults[1] surveyed in each household have some level of education and 23% of households have no literate members (see table 2.2). Of the children in each household in the relevant age groups, 74% are attending primary school, while 18% are attending secondary school. The drop-off in attendance from primary to secondary school may be explained by the absence of secondary schools in those remote areas.

[1] Adults are defined as household members who are age 21 or older.

Table 2.1 Selected Demographic Characteristics of Households by Community.

Community	HH Size	Female Headed HH (%)	Age Categories (%)				Mean Age HHH
			0-5 years	6-15 years	16-65 years	+ 65 years	
Cajeun	5.0	19	13	38	42	7	52.5
Charettes	5.3	8	15	38	43	4	51.2
La Saline	5.3	3	17	35	45	3	49.0
Merceron	6.4	6	13	24	59	4	49.9
Despuzeau	5.4	6	14	33	52	2	46.3
Palmiste à Vin	5.1	11	13	30	55	2	45.5
Lafond	6.9	5	10	34	52	4	52.3
Lavanneau	6.5	6	14	36	47	3	49.7
Mussac	6.8	11	10	33	52	5	54.1
Bodarie	6.4	11	14	31	50	4	49.6
Bercy	5.4	3	13	30	55	2	48.2
Dory	4.7	5	8	30	55	7	53.7
Mapou	6.5	5	16	30	52	2	47.5
Bel-Air	6.2	3	25	31	41	3	41.5
Macary	5.7	6	17	26	53	4	50.9
Oranger	6.6	3	14	34	49	4	52.2
Ka Manno (Ka David)	5.8	18	10	33	54	3	50.8
Cyvadier	5.4	5	7	29	59	4	51.3
Meyer	6.3	3	9	37	49	6	52.7
Bois d'ormes	4.8	17	13	31	50	6	54.1
Fond'Oies	5.5	11	11	32	53	3	51.8
Cachiman	4.8	11	12	36	44	8	52.3
Pichon	6.8	3	16	40	42	2	44.6
Balan	6.3	3	7	27	63	4	52.3
Boen	5.7	3	9	28	59	4	48.1
Taverte	6.4	14	12	34	51	3	52.2
La Porte	6.5	3	11	34	52	3	45.4
Ka Paul	4.8	16	15	28	48	9	56.4
Bassin Bleu	5.5	29	13	25	55	7	52.7

Key : HH= Household
HHH = Head of household

Fig 2.1 Age Structure of the Sample

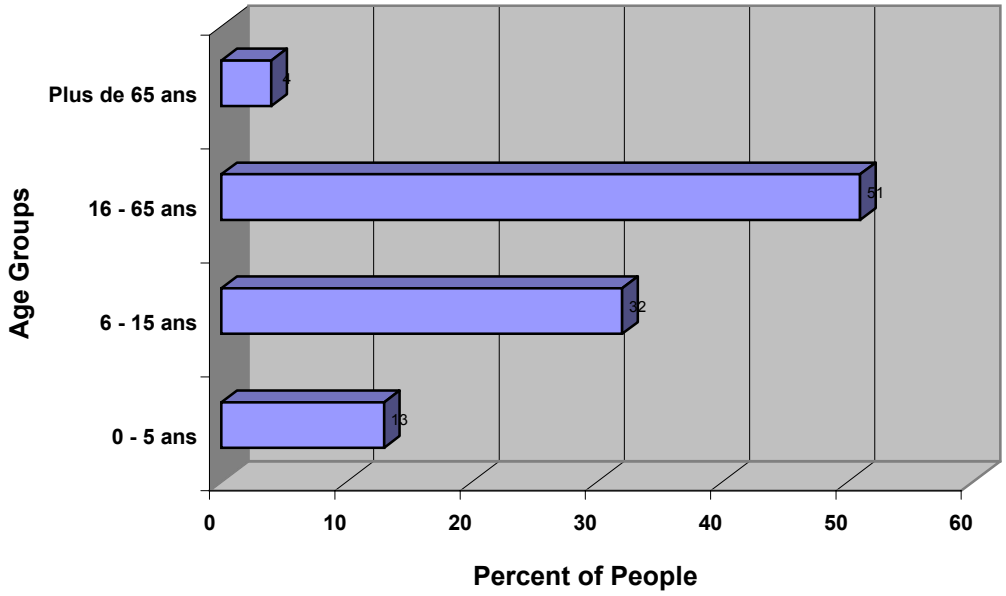

Table 2.2 Educational Characteristics of Households by Communities and Agro-Ecological Zones.

Zone/ Community	% HHs with no Literate Members	% Children/HH Attending Primary School	% Children/HH Attending Secondary School	% Adults/HH with Some Level of Education
Hillside	**23.07**	**75.05**	**14.79**	**24.47**
Charrette	29.26	77.38	8.79	21.26
Palmiste A Vin	18.11	72.25	17.25	27.04
Lafond	18.83	71.42	18.52	33.75
Mussac	18.73	74.72	19.94	22.03
Bodarie	19.33	71.31	16.99	25.13
Mapou	14.90	79.29	12.35	33.44
Bel-air	11.59	81.75	11.16	30.18
Macary	28.96	69.67	22.65	21.51
Bois d'Orme	34.35	74.49	11.78	15.55
Fond'Oies	37.05	78.10	8.26	13.65
Hillside Control Group	**26.31**	**74.48**	**15.61**	**21.38**
Pichon	18.29	72.74	17.70	20.60
La Porte	23.22	77.71	11.97	23.66
Ka Paul	29.14	66.06	22.42	26.78
Bassin Bleu	34.30	79.04	12.12	15.52
Irrigated Plain	**21.50**	**74.99**	**19.11**	**27.75**
Cajun	31.88	79.50	14.11	16.45
La Saline	18.74	74.07	22.65	29.93
Merceron	25.61	72.73	17.72	24.02
Despuzeau	26.58	82.80	14.70	21.93
Lavanneau (bas)	13.63	70.90	24.56	30.52
Bercy	26.01	75.00	17.34	22.08
Dory	23.13	79.28	17.67	35.47
Oranger	18.21	84.96	10.65	26.66
Ka Mano/ka David	19.97	69.50	17.84	29.16
Cyvadier	21.23	66.26	28.33	33.17
Meyer	17.17	67.04	28.50	30.82
Tarvette	16.21	77.79	15.71	31.23
Irrigated Plain Control Group	**22.59**	**68.82**	**23.88**	**31.82**
Cachiman	34.14	70.31	16.97	24.94
Balan	19.10	67.18	28.22	32.93
Boen	15.35	69.29	25.05	37.06
Total	**22.78**	**74.39**	**17.55**	**26.21**

2.3 Household Access to Land

As shown in table 2.3, households tend to spread their landholdings over several parcels. For the entire sample, the average number of parcels is 3.5, with a slightly higher number of parcels per farm in the hillside assisted area (3.53) relative to the irrigated plain (3.41). Throughout the sample, the total area cultivated is very limited and varies slightly between agroecological zones and communities. Mapou, and Bel-Air in the Hillside zone represent communities where households cultivate 1.50 Karo or 1.9 ha. on average while households in Charrette, Ka Paul, Bassin Bleu and Cajeun cultivated less than 0.50 Karo or 0.65 ha. [Note : a Karo is a traditional land measurement unit in Haiti and equals approximately 1.29 hectares]

In Haiti, land tenure arrangements are somewhat complicated mainly because of the scarcity of land and the disparities in access to political power among the farmers. Land can be owned, rented, sharecropped, used as legally undivided family land (*terre indivise*) or borrowed. Ownership can be analyzed both in terms of the total amount of land characterized as inherited or purchased and in terms of the distribution of owned land among households. In the first case, nearly 50 percent of the parcels are owned, and most of these were acquired through inheritance (table 2.3). However, some of the communities show a different picture. In Cajeun, Bercy and Dory in the irrigated plain, more than 60 percent of the lands is owned by the households cultivating them while in Palmiste à Vin, Lafond, Merceron and Despuzeau more than 30 percent of parcels are sharecropped.

Table 2.3 Household Access to Land by Agroecological Zone and Community.

Zone/ Community	Land Holdings per HH			Means of Access							
	Number of Plots	Total Area	Area Cultivated	Inherited (% of total area)	Purchased	Inherited and Leased out	Purchased and Leased out	Rented	Share-cropped	Common Plots	Others
Hillside	**3.53**	**1.43**	**0.93**	**34.85**	**21.55**	**3.95**	**.81**	**8.56**	**16.98**	**9.91**	**3.40**
Charette	4.05	0.58	0.38	46.16	17.06	6.41	0.00	7.72	10.32	9.38	2.95
Palmiste A Vin	4.11	1.53	1.16	35.57	10.14	0.69	0.00	13.45	32.42	4.49	3.24
Lafond	3.28	1.11	0.86	28.33	13.92	3.12	0.00	7.08	30.42	12.92	4.21
Mussac	3.94	1.37	0.67	30.32	14.80	2.92	1.85	7.41	21.69	16.81	4.20
Bodarie	3.37	1.69	1.19	35.30	24.03	8.57	0.95	4.76	15.43	10.00	0.95
Mapou	3.76	2.36	1.50	27.41	36.33	4.98	2.50	13.38	2.76	11.23	1.40
Bel-air	3.14	2.44	1.53	33.96	38.83	4.50	0.00	2.93	11.49	8.29	0.00
Macary	4.23	0.89	0.57	43.85	26.54	5.84	1.63	13.24	6.40	2.50	0.00
Bois d'Orme	2.17	1.45	0.65	35.14	23.80	0.69	1.25	2.31	15.28	18.06	3.47
Fond'Oies	3.24	0.94	0.81	33.03	10.48	1.80	0.00	13.29	23.07	5.05	13.29
Hillside Control Group	**3.64**	**1.07**	**0.66**	**21.81**	**27.49**	**2.52**	**0.88**	**20.68**	**13.65**	**10.47**	**1.79**
Pichon	3.72	2.08	1.20	27.80	47.99	0.00	0.69	9.11	6.06	5.56	2.78
La Porte	4.32	0.92	0.67	7.76	16.79	0.88	0.71	50.87	11.04	11.21	0.74
Ka Paul	3.59	0.58	0.38	35.69	24.27	5.51	1.04	17.39	3.91	8.28	3.91
Bassin Bleu	2.97	0.65	0.36	17.01	20.36	3.86	1.05	7.39	31.38	16.32	0.00

Key : HH= Household
HHH = Head of household

Table 2.3 Household Access to Land by Agroecological Zone and Community Cont'd.

Zone/ Community	Land Holdings per HH			Means of Access							
	Number of Plots	Total Area	Area Cultivated	Inherited (% of total area)	Purchased	Inherited and Leased out	Purchased and Leased out	Rented	Share-cropped	Common Plots	Others
Irrigated Plain	**3.41**	**1.01**	**0.69**	**25.82**	**25.47**	**3.30**	**1.66**	**13.53**	**21.21**	**5.12**	**3.44**
Cajun	3.65	0.57	0.39	45.67	26.82	4.05	0.90	2.89	9.32	7.26	0.39
La Saline	1.72	0.92	0.56	15.74	55.79	2.78	1.39	0.69	16.67	0.00	6.94
Merceron	4.17	1.24	1.12	29.11	14.15	3.09	0.69	5.79	36.30	1.85	9.01
Despuzeau	4.31	1.07	0.99	19.21	7.65	4.28	0.00	3.11	59.46	0.00	6.28
Lavanneau (bas)	3.29	1.14	0.55	36.26	15.86	4.38	3.03	7.10	17.81	11.76	0.95
Bercy	3.69	1.37	1.00	15.98	35.44	3.29	2.16	18.34	17.86	4.70	2.22
Dory	3.18	1.46	1.05	19.66	42.91	4.44	8.16	12.01	5.56	1.50	5.77
Oranger	3.25	1.03	0.48	30.68	20.98	5.56	0.00	4.35	24.27	13.70	0.46
Ka Mano/ka David	2.76	0.88	0.56	15.13	10.53	0.88	0.00	54.96	13.60	0.00	4.91
Cyvadier	3.02	0.72	0.47	37.90	22.82	1.19	0.79	18.45	15.67	1.19	1.98
Meyer	4.00	1.09	0.64	10.77	29.89	2.82	0.96	18.33	24.23	11.62	1.37
Tarvette	3.88	0.70	0.49	33.41	21.77	3.32	1.59	12.76	17.31	8.25	1.59
Irrigated Plain Control Group	**3.45**	**1.60**	**1.20**	**30.05**	**30.19**	**3.56**	**2.31**	**5.52**	**22.23**	**3.21**	**2.93**
Cachiman	1.91	1.19	0.78	21.19	48.57	2.38	3.33	4.76	13.33	4.29	2.14
Balan	3.86	2.30	1.66	39.26	27.44	0.68	0.93	0.77	22.68	3.02	5.23
Boen	4.45	1.30	1.15	29.24	15.93	7.46	2.72	10.85	29.99	2.41	1.41
Total	**3.49**	**1.22**	**0.82**	**28.84**	**24.87**	**3.45**	**1.33**	**11.93**	**18.87**	**7.27**	**3.16**

Key : HH= Household
HHH = Head of household

3.1 Summary Indicator Tables

The following indicator tables summarize the results of the final impact survey. Detailed analysis of these tables is found later in this report.

Table 3.1: Percentage of Households using ORE Improved Seeds Comparing 2001 results with that of 2000 and 1999.

	Agro-Ecological Zone				Gender		
	Hillside	Hillside – Control Group	Irrigated Plain	Irrigated Plain – Control Group	Women	Men	Total[2]
Using ORE Improved Seeds (2001)							
Yes	25	4	13	12	14	19	19
No	75	96	87	88	87	81	81
Total	100	100	100	100	100	100	100
No. of households surveyed	368	140	454	110	66	756	822
Using ORE Improved Seeds (2000)							
Yes	4	1	3	1	3	4	4
No	96	99	97	99	97	96	96
Total	100	100	100	100	100	100	100
No. of households surveyed	365	142	456	111	70	751	821
Using ORE Improved Seeds (1999)[3]							
Yes	3	No sample	0	No sample	1	1	1
No	97	No sample	100	No sample	99	99	99
Total	100	No sample	100	No sample	100	100	100
No. of households surveyed	471	No sample	462	No sample	193	886	1,079[4]

[2]The total column measures utilization rates in HGRP-assisted communities only. The 1999 (baseline survey) total column includes the entire baseline sample.

[3] No control group households were surveyed during the baseline study.

Table 3.2A: Percentage of Households with Increased Awareness of Disaster Mitigation and Preparedness – Final Impact Survey.

Agro-Ecological Zone	Community	None	One[5]	Two[6]	Three or More	Total
Hillside	Charrette	41	26	30	3	100
	Palmiste A Vin	0	36	53	11	100
	Lafond	5	40	37	18	100
	Mussac	3	61	31	5	100
	Bodarie	6	26	46	22	100
	Mapou	0	32	39	28	100
	Bel-air	5	14	27	54	100
	Macary	17	40	40	3	100
	Bois d'Orme	6	39	28	28	100
	Fond'Oies	0	57	30	14	100
	Total – Hillside	**8**	**37**	**36**	**19**	**100**
Irrigated Plain	Cajun	38	41	16	5	100
	La Saline	3	22	42	33	100
	Merceron	8	58	28	6	100
	Despuzeau	0	47	47	6	100
	Lavanneau (bas)	3	29	46	23	100
	Bercy	5	51	21	23	100
	Dory	3	51	33	13	100
	Oranger	6	31	44	19	100
	Ka Mano	21	53	21	5	100
	Cyvadier	21	36	26	17	100
	Meyer	18	46	26	10	100
	Tarvette (ka David)	29	41	29	2	100
	Total – Irrigated Plain	**13**	**42**	**31**	**13**	**100**
	Total Sample	**11**	**40**	**33**	**16**	**100%**

[4] 146 households in the non-irrigated plain zone were surveyed during the baseline. No communities in the non-irrigated plain zone were surveyed during the mid-term and final impact studies.
[5] Percentage of households in HGRP-assisted communities that mentioned one of the following actions (as currently defined in USAID's Performance Monitoring Plan): 1) reduce flooding through soil & water conservation; 2) make a map of hazards; 3) listen to the radio; 4) make the house stronger; 5) go to a shelter; 6) put livestock in a safe place; 7) stock up on supplies & water.
[6] Percentage of households in HGRP-assisted communities that mentioned two of the actions listed above. The case is the same for the "three or more" column.

Table 3.2B: Percentage of Households with Increased Awareness of Disaster Mitigation and Preparedness by Assisted Community.

Agro-Ecological Zone	Community	None	One[7]	Two[8]	Three or More	Total
Hillside	Charrette	28	23	18	31	100
	Palmiste A Vin	0	33	33	33	100
	Lafond	3	28	30	40	100
	Mussac	3	8	50	39	100
	Bodarie	6	9	43	43	100
	Mapou	0	29	40	32	100
	Bel-air	5	5	19	70	100
	Macary	11	23	40	26	100
	Bois d'Orme	6	14	39	42	100
	Fond'Oies	0	36	38	27	100
	Total – Hillside	**6**	**21**	**35**	**38**	**45**
Irrigated Plain	Cajun	24	24	32	30	100
	La Saline	0	17	28	56	100
	Merceron	0	50	25	17	100
	Despuzeau	0	42	39	19	100
	Lavanneau (bas)	3	14	31	51	100
	Bercy	0	44	21	36	100
	Dory	0	36	44	21	100
	Oranger	0	11	47	42	100
	Ka Mano	16	34	32	18	100
	Cyvadier	12	26	29	33	100
	Meyer	10	28	28	33	100
	Tarvette (ka David)	19	26	38	17	100
	Total – Irrigated Plain	**8**	**30**	**33**	**30**	**55**
	Total Sample	**7**	**26**	**34**	**33**	**100%**

[7] Percentage of households in HGRP-assisted communities that mentioned one of nine appropriate actions: 1) reduce flooding through soil & water conservation; 2) make a map of hazards; 3) listen to the radio; 4) make the house stronger; 5) go to a shelter; 6) put livestock in a safe place; 7) stock up on supplies & water 8) take shelter under a bed or table; 9) relocate the house in an appropriate location.

[8] Percentage of households in HGRP-assisted communities that mentioned two of the actions listed above. The case is the same for the "three or more" column.

Table 3.3: Household Knowledge of Disaster Preparedness Committees and Plans by Agro-Ecological Zone Comparing 2001 results with that of 2000 and 1999.

Household Knowledge of Disaster Preparedness Committees and Plans	Agro-Ecological Zone				Gender		Total
	Hillside	Hillside – Control Group	Irrigated Plain	Irrigated Plain – Control Group		Men	
1. Knowledge of the disaster preparedness committee	61	13	40	34	49	51	49.5
2. Knowledge of the disaster preparedness plan	37	6	22	20	26	29	28
3. Knowledge of the contents of the disaster preparedness plan	33	6	18	17	18	25	24
Households meeting at least one of the three conditions above 2001	61	13	41	34	50	50	**50**
No. of households surveyed	369	140	455	110	66	758	824
1. Knowledge of the disaster preparedness committee	31	12	28	9	30	29	29
2. Knowledge of the disaster preparedness plan	13	8	11	7	14	11	12
3. Knowledge of the contents of the disaster preparedness plan	10	6	7	6	12	8	8
Households meeting at least one of the three conditions above 2000	31	13	29	10	29	30	**30**
No. of households surveyed	365	142	456	111	70	751	821
Households meeting at least one of the three conditions above 1999[9]	8	No sample	2	No sample	4	5	**5**

[9] No control group households were surveyed during the baseline study.

Table 3.4: Gross Average Annual Household Revenue[10] in Gourdes (US $ Equivalent)[11] according to Head of Household Gender by Agro-Ecological Zone and Difference of Means Test Results – Last-Impact Survey.

Head of Household Gender	Hillside Zone		Hillside Zone – Control Group		Irrigated Plain Zone		Irrigated Plain Zone – Control Group		Total Sample	
	Average revenue Gourdes	**No. of house holds**	**Average revenue Gourdes**	**No. of house holds**	**Average revenue Gourdes**	**No. of house holds**	**Average revenue Gourdes**	**No. of house holds**	**Average revenue Gourdes**	**No. of house holds**
Women	8,713 ***(US$ 363)***	32	11,460 ***(US$ 478)***	18	16,638 ***(US$ 693)***	34	16,993 ***(US$ 708)***	6	12,808 ***(US$ 534)***	90
Men	19,335 ***($ 806)***	337	18,640 ***($777)***	122	22,811 ***($950)***	421	27,701 ***($ 1,154)***	104	21,619 ***($ 901)***	964
Gross average annual household revenue	18,414 ***($ 767)***	369	17,717 ***($ 738)***	140	22,349 ***($ 931)***	455	27,117 ***($ 1,155)***	110	20,879 ***($ 870)***	1074
Standard deviation	33,397 ***(US $ 1,392)***		27,268 ***(US $ 1,136)***		27,804 ***(US $ 1,159)***		31,995 ***(US $ 1,333)***			
No. Of households	369		140		455		110			
Difference of means test results	No statistically significant difference				No statistically significant difference					

[10] The indicator refers to gross average annual household revenue from all identified sources **not** net income (revenue – expenses) and is not an indicator in USAID's Performance Monitoring Plan.
[11] The exchange rate of 24 gourdes = US $1 was used for the final impact survey.

Table 3.5: Gross Average Annual Household Revenue in Inflation-Adjusted Gourdes (US $ Equivalent) Comparing 2001 with 2000.

Revenue Source	Hillside Zone		Irrigated Plain Zone		Total Sample	
	Average Revenue 2001 Gourdes	Average Revenue 2000 Gourdes	Average Revenue 2001 Gourdes	Average Revenue 2000 Gourdes	Average Revenue 2001 Gourdes	Average Revenue 2000 Gourdes
Gross average annual household revenue	18,414 *(US $ 767)*	12,354 *(US $ 618)*	22,349 *(US $ 931)*	14,630 *(US $ 732)*	20,585 *(US $ 858)*	13,481 *(US $ 674)*
Standard deviation	33,397	11,174	27,804	13,754	30,483	12,452
Confidence interval – 5%						
Lower limit	14,396 *($ 600)*	11,345 *($ 567)*	19,639 *($ 818)*	13,376 *($ 669)*	18,461 *($ 769)*	12,682 *($ 634)*
Upper limit	21,892 *($ 912)*	13,363 *($ 736)*	24,959 *($ 1,040)*	15,890 *($ 795)*	22,709 *($ 946)*	14,280 *($ 714)*
No. Of households	369	365	455	456	824	821
Difference of means test results					statistically significant difference	

3.2 NUMBER OF COMMUNITIES MORE RESILIENT TO NATURAL DISASTERS

USAID defines resilience in the HGRP PMP as the ability to recover rapidly. Resilience results from a synergy of multiple activities that increase the ability of communities to reduce their vulnerability to and recover more quickly from natural disasters. The SECID surveys contribute to USAID's ability to report on whether it is meeting this indicator for the HGRP special strategic objective – "Communities recover from Hurricane Georges' impact and reduce their vulnerability to future natural disasters." The SECID surveys contribute to measuring resilience by determining the percentage of households using ORE improved seeds (see indicator 2 below). USAID will also use information provided in Pan American Development Foundation progress reports to report on this indicator.

3.3 PERCENTAGE OF HOUSEHOLDS USING ORE IMPROVED SEEDS

As mentioned above, this indicator assists USAID in determining progress towards increasing the number of communities more resilient to natural disasters. The SECID final impact survey found that 46% of the 822 households investigated in HGRP-assisted communities knew about the ORE improved seeds and 19% indicated that they had used the seeds (table 3.6). Overall, this indicates a big improvement in terms of seed used when comparing this result to the mid-term impact survey where only 4% of the households in the assisted communities declared using ORE seeds (table 3.1)

Data at the agroecological zones level (table 3.6) showed that, within the assisted communities, much more households (25%) in the hillside zone declared using ORE seeds than in the irrigated plain (13%).

In the hillside zone, knowledge of the ORE seeds has increased significantly during the 2000 – 2001 agricultural cycle. In certain communities such as Palmiste à Vin, Charrette, Lafond, Bodarie, Macary, La Saline, Bercy and Taverte, 60% or more households affirmed knowing Ore seeds and 20 percent of the households used them to improve their land productivity (table 3.7).

On the contrary, knowledge of ORE seeds is significant only in La Saline, Bercy and Taverte where corollary more than 30% of their households affirmed using improved seeds. In all other communities in the irrigated plain, knowledge of ORE improved seeds is poor and very few households used the seeds during the last agricultural cycle. For example, nine (9) out of twelve (12) communities in the irrigated plain zone have less than 10% of their households using improved seeds and one fourth have none of their households using ORE improved seeds.

These findings are somewhat strange and require more investigation as someone could expect that households in the irrigated plain would tend to take advantage of the availability of improved seeds to increase their land productivity and, in the same token, increase their gross income. A tentative explanation for that may be found by the fact that farmers, as mentioned in

the community progress reports, in some communities (Merceron, Despuzeau) grow mainly sugar cane and sorghum. These findings could also be explained by the fact that ORE seed were not available at the time of the plantings season in certain communities.

A Chi-Square test was used to compare the assisted and non assisted communities as well as to determine gender influence on ORE improved seeds utilization rates. When comparing the Hillside zone and the Hillside control group, Chi-square test result (<0.50) indicated that there was perfect agreement between the data and the null hypothesis. Therefore, the difference in terms of percent of people using ORE seeds between the Hillside and the Hillside control group is highly statistically significant. Same analysis was done to compare the Irrigated plain and the Irrigated Control Group. The result (Chi-Square >0.5) showed there are no significant differences between those two groups. The explanations for this are twofold : 1) as reported earlier, ORE seeds utilization rates did not improve since the mid-term impact survey in many communities in the irrigated plain; and, 2) some farmers located outside the assisted communities had the possibility to get ORE seeds and use them. This is particularly the case for Cachiman, a community located in the irrigated plain control group, where a significant number of households (51%) affirmed using ORE improved seeds. In addition, the final impact survey results revealed that head of household's gender influenced the utilization rates of ORE improved seeds. As shown in the table 3.6, 19% of men compared to 14% of women used ORE improved seeds and the difference is statistically significant.

In conclusion, ORE improved seed utilization rates have increased within the assisted communities over the two years of the HGRP period. From September 1999 to October 2001, an increase of 18% was observed in terms of households using improved seeds. The increase in seed utilization rate could be even higher if more communities located in the irrigated plain zone used the seeds provided by ORE. Still, the reasons for not using the seeds will be further investigated by the time of the final evaluation.

Table 3.6 ORE Improved Seeds Utilization Rate and Knowledge by Agro-Ecological Zones and Gender.

	Agro-Ecological Zone				Gender		
					Women	Men	Total[12]
	Hillside	Hillside – Control Group	Irrigated Plain	Irrigated Plain – Control Group			
Using ORE Improved Seeds							
Yes	25□	4□	13	12	14	19	**19**
No	75	96	87	88	87	81	81
Total	100	100	100	100	100	100	100
No. of households surveyed	368	140	454	110	66	756	822
Knowledge of ORE Improved Seeds							
Yes	58.2	15	35.5	18.2	33	47	**46**
No	41.8	85	64.5	81.8	67	53	54
Total	100	100	100	100	100	100	100
No. of households surveyed	368	140	454	110	66	756	822

[12]The total column measures utilization rates in HGRP-assisted communities only. The 1999 (baseline survey) total column includes the entire baseline sample.

Table 3.7 ORE Improved Seeds Utilization Rate and Knowledge by Agro-Ecological Zones and Gender.

Zone/ Community	% HHs knowing ORE Seeds	% HH Using ORE Seeds
Hillside	**58.2**	**25.5**
Charrette	76.9	30.8
Palmiste A Vin	100.0	91.7
Lafond	67.5	20.0
Mussac	11.4	2.9
Bodarie	60.0	22.9
Mapou	42.1	15.8
Bel-air	64.9	35.1
Macary	68.6	22.9
Bois d'Orme	25.0	13.9
Fond'Oies	62.2	0.00
Hillside Control Group	**15.0**	**3.6**
Pichon	8.3	0.00
La Porte	8.8	2.9
Ka Paul	43.8	12.5
Bassin Bleu	2.6	0.00
Irrigated Plain	**35.2**	**13.4**
Cajun	13.9	0.00
La Saline	55.6	33.3
Merceron	36.1	5.6
Despuzeau	0.00	0.00
Lavanneau (bas)	25.7	2.9
Bercy	74.4	35.9
Dory	48.7	0.00
Oranger	11.1	0.00
Ka Mano/ka David	15.8	5.3
Cyvadier	26.2	14.3
Meyer	28.2	2.6
Tarvette	78.6	54.8
Irrigated Plain Control Group	**18.2**	**11.8**
Cachiman	51.4	37.1
Balan	2.7	0.00
Boen	2.6	0.00

3.4. PERCENTAGE OF HOUSEHOLDS WITH INCREASED AWARENESS OF DISASTER MITIGATION AND PREPAREDNESS

This is a performance indicator listed under Intermediate Result 5 – local capacity to mitigate and prepare for natural disasters increased – in USAID's PMP. As defined in the PMP, households with increased awareness of disaster mitigation & preparedness are households where at least one of the members thinks s/he should do at least 3 of the following in the case of a natural disaster:

1. Reduce flooding through soil & water conservation;
2. Make a map of hazards;
3. Listen to the radio;
4. Make the house stronger;
5. Go to a shelter;
6. Put livestock in a safe place;
7. Stock up on supplies & water.

The final impact survey showed that households were able to identify also other appropriate things to do in the case of a natural disaster (table 3.8). For example, 25 % of the household in the assisted communities thought they would seek shelter under a bed or a table and 18% affirmed they would relocate their house in an appropriate location in a preparation of the next hurricane. Analysis in term of awareness of disaster mitigation and preparedness will consider the 7 potential answers as stated in the indicator definition as well as the nine (9) appropriate answers given by the household members.

Table 3.8 What Household Members think they will do in the case of a natural disaster[13]

What should you do in case of natural disaster?	Number of Households	Percent of Households[14]
1. Reduce flooding through soil & water conservation	680	63.3
2. Make a map of hazards	0	0
3. Listen to the radio	145	13.5
4. Make the house stronger	538	50.1
5. Go to a shelter	39	3.6
6. Put livestock in a safe place	145	13.5
7. Stock up on supplies & water	220	20.5
8. Stay in the house and seek shelter under a bed or a table	270	25.1
9. Build or relocate to an appropriate location	193	18

When analyzing the data in view of the indicator as stated in USAID PMP, the data showed that 89% of the respondents were able to identify at least one of the actions listed above. Among them, 40% identified one, 33% mentioned two, and 16% were considered as people with

[13] This indicator is a composite of 3 questions addressed to the household members: What can you do to lessen the impacts of natural disasters? In the event of a disaster, what can you do to protect both your family and yourself? What must be done to assure that your family and community are prepared to face the next hurricane?

[14] Total percentage does not add up to 100% since one household member can give more than one answer.

increased awareness of disaster mitigation and preparedness (table 3.10A). Communities such as Lafond, Bodarie, Mapou, Bel-Air, Bois d'Orme, La Saline, Lavanneau, Bercy, Oranger and Cyvadier have more than 16% of their households capable to name at least three actions. On the contrary, households in communities such as Charette, Mussac, Macary, Cajeun, Merceron, Despuzeau, Ka Manno and Taverte could hardly name three actions that can be taken in the case of a natural disaster.

Analysis at the agroecological zone level revealed that communities located in the hillside zone showed a greater percentage of households with increased awareness of disaster mitigation and preparedness than the communities located in the irrigated plain. In the hillside communities, 19% of the households surveyed could list at least three of the actions mentioned in the USAID PMP while in the irrigated plain zone only 13% of the households could name at least three of the actions (table 3.9). Households in the community control groups showed a lower percentage of households with increased awareness of disaster mitigation and preparedness. According to the table 3.9, 11% of the households surveyed in the hillside control group were able to name three actions as mentioned in the indicator definition while in the irrigated control group 12% were able to do the same. However, the slightest difference observed across agroecological does not indicate that communities located in the hillside zones are better prepared in terms of awareness and disaster mitigation. In fact, a chi square analysis using a two by two contingency table showed the difference observed across agroecological zones and between assisted and control group communities in terms of awareness of disaster mitigation is not statistically significant. In other terms, all the HGRP assisted communities are in the same stage in terms of awareness of disaster mitigation and preparedness.

When comparing data from the mid-term impact and final impact survey, one can see that households across agro-ecological zones have made significant progress in terms of awareness of disaster mitigation and preparedness. In fact, an increase of three percent of respondents with increased awareness of disaster mitigation and preparedness was observed between the last two surveys. More importantly, more and more people (89%) were able to identify at least one action that has to be taken in a case of a natural disaster. However, the data, as showed in the table 3.9 and 3.10A, does not indicate that the improvement observed in terms of awareness of disaster mitigation in terms and preparedness is due only to the HGRP project effect. If the HGRP project did have some effect, as an analyst may conclude with regard to the other indicators related to the awareness of disaster mitigation and preparedness, the effect of the disaster mitigation project component was spread in the community considered as control group and located near the assisted-communities. That may explain why there was no statistically significant difference between control group and assisted communities in terms of awareness of disaster mitigation and preparedness.

When analyzing the data in view of all nine appropriate answers given by the household members in case of a natural disaster, the data showed that 33% of the respondents are better aware of disaster mitigation and preparedness; 34% were able to list two appropriate actions that have to be taken in case of natural disaster; 26% were able to identify one; and, 93% affirmed at least one action they would take (table 3.10B).

Table 3.9 Percentage of Households with Increased Awareness of Disaster Mitigation and Preparedness by Agroecological Zones.

	Agro-Ecological Zone			
	Hillside	**Hillside Control Group**	**Irrigated Plain**	**Irrigated Plain Control Group**
No Action	8	19	13	5
One Action	37	38	42	43
Two Actions	36	31	31	41
Three Actions	19□	11□	13□	12□
Number of households surveyed	369	140	455	110
Chi Square Test Result	Pearson Chi-Square = 0.050 No Statistically significant difference		Pearson Chi-Square = 0.0658 No Statistically significant difference	

□ No statistically significant difference

Table 3.10A: Percentage of Households with Increased Awareness of Disaster Mitigation and Preparedness by Assisted Community.

Agro-Ecological Zone	Community	None	One[15]	Two[16]	Three or More	Total
Hillside	Charrette	41	26	30	3	100
	Palmiste A Vin	0	36	53	11	100
	Lafond	5	40	37	18	100
	Mussac	3	61	31	5	100
	Bodarie	6	26	46	22	100
	Mapou	0	32	39	28	100
	Bel-air	5	14	27	54	100
	Macary	17	40	40	3	100
	Bois d'Orme	6	39	28	28	100
	Fond'Oies	0	57	30	14	100
	Total – Hillside	**8**	**37**	**36**	**19**	**100**
Irrigated Plain	Cajun	38	41	16	5	100
	La Saline	3	22	42	33	100
	Merceron	8	58	28	6	100
	Despuzeau	0	47	47	6	100
	Lavanneau (bas)	3	29	46	23	100
	Bercy	5	51	21	23	100
	Dory	3	51	33	13	100
	Oranger	6	31	44	19	100
	Ka Mano	21	53	21	5	100
	Cyvadier	21	36	26	17	100
	Meyer	18	46	26	10	100
	Tarvette (ka David)	29	41	29	2	100
	Total – Irrigated Plain	**13**	**42**	**31**	**13**	**100**
	Total Sample	**11**	**40**	**33**	**16**	**100%**

[15] Percentage of households in HGRP-assisted communities that mentioned one of the following actions (as currently defined in USAID's Performance Monitoring Plan): 1) reduce flooding through soil & water conservation; 2) make a map of hazards; 3) listen to the radio; 4) make the house stronger; 5) go to a shelter; 6) put livestock in a safe place; 7) stock up on supplies & water.

[16] Percentage of households in HGRP-assisted communities that mentioned two of the actions listed above. The case is the same for the "three or more" column.

Table 3.10B: Percentage of Households with Increased Awareness of Disaster Mitigation and Preparedness by Assisted Community.

Agro-Ecological Zone	Community	None	One[17]	Two[18]	Three or More	Total
Hillside	Charrette	28	23	18	31	100
	Palmiste A Vin	0	33	33	33	100
	Lafond	3	28	30	40	100
	Mussac	3	8	50	39	100
	Bodarie	6	9	43	43	100
	Mapou	0	29	40	32	100
	Bel-air	5	5	19	70	100
	Macary	11	23	40	26	100
	Bois d'Orme	6	14	39	42	100
	Fond'Oies	0	36	38	27	100
	Total – Hillside	**8**	**35**	**38**	**19**	**100**
Irrigated Plain	Cajun	24	24	32	30	100
	La Saline	0	17	28	56	100
	Merceron	0	50	25	17	100
	Despuzeau	0	42	39	19	100
	Lavanneau (bas)	3	14	31	51	100
	Bercy	0	44	21	36	100
	Dory	0	36	44	21	100
	Oranger	0	11	47	42	100
	Ka Mano	16	34	32	18	100
	Cyvadier	12	26	29	33	100
	Meyer	10	28	28	33	100
	Tarvette (ka David)	19	26	38	17	100
	Total – Irrigated Plain	**10**	**44**	**32**	**14**	**100**
	Total Sample	**7**	**26**	**34**	**33**	**100%**

[17] Percentage of households in HGRP-assisted communities that mentioned all nine appropriate actions: 1) reduce flooding through soil & water conservation; 2) make a map of hazards; 3) listen to the radio; 4) make the house stronger; 5) go to a shelter; 6) put livestock in a safe place; 7) stock up on supplies & water 8) take shelter under a bed or table; 9) relocate the house in an appropriate location.

[18] Percentage of households in HGRP-assisted communities that mentioned two of the actions listed above. The case is the same for the "three or more" column.

Another important component of the HGRP is disaster mitigation and preparedness training at the community level to establish functioning disaster mitigation and preparedness committees and plans. PADF is measuring the number of training participants and the number of community organizations whose members have participated in disaster mitigation and preparedness seminars. The SECID surveys measure the percentage of households better aware of disaster mitigation and preparedness committees and plans.

Table 3.11 shows the percentage of households aware of the disaster preparedness committee and plans in their HGRP-assisted community and is the result of aggregating responses to the following three questions:

1. Do you know of a group or committee in your community that helps people prepare themselves for future natural disasters?
2. Do you know of the existence of a disaster preparedness and mitigation plan in your community?
3. Do you know the contents of this plan?

The final impact survey revealed that 50% of HGRP-assisted households headed by both men and women answered positively to at least one of the three questions. In addition, 49% of households surveyed in the HGRP assisted communities affirmed knowing about the disaster preparedness committee or group responsible for assisting the community, 28% declared being familiar with the disaster preparedness plan in their community and 24% said they knew the contents of this plan.

When comparing the final impact survey results with those of the mid-term survey and baseline survey, one can conclude that the HGRP has made significant progress on this indicator. In fact, the percentage of households in the assisted communities capable to respond positively to at least one of the three questions in the mid-term survey grew constantly across the two years of HGRP implementation. While only 5% of the households in the assisted communities knew about the disaster preparedness committees and plans at the time of the baseline survey, this number grew to 30% and then to 50% at the end of the HGRP projects.

The situation is even more encouraging when analyzing the numbers by agro-ecological zone where 61% and 41% of households in HGRP-assisted communities in the hillside and irrigated plain zones, respectively, confirmed their knowledge of either the existence of a disaster committee, a disaster preparedness plan or the contents of this plan. All the results are depicted below in Table 3.11 by agro-ecological zone and head of household by gender.

Table 3.11 Household Knowledge of Disaster Preparedness Committees and Plans by Agro-Ecological Zone – Mid-Term and Final Impact Surveys.

	Agro-Ecological Zone				Gender		Total
	Hillside	Hillside – Control Group	Irrigated Plain	Irrigated Plain – Control Group	Women	Men	
Household Knowledge of Disaster Preparedness Committees and Plans Final Impact Survey 2001							
1. Knowledge of the disaster preparedness committee	61%	13%	40%	34%	49%	50%	49%
2. Knowledge of the disaster preparedness plan	36%	6%	22%	20%	26%	29%	28%
3- Knowledge of the contents of the disaster preparedness plan	33%	6%	18%	17%	18%	25%	24%
4-Households meeting at least one of the three conditions above	61%	13%	41%	34%	50%	50%	50%
No. of households surveyed	**369**	**140**	**455**	**110**	**66**	**758**	**824**
Household Knowledge of Disaster Preparedness Committees and Plans Mid-term Impact Survey 2000							
1. Knowledge of the disaster preparedness committee	31%	12%	28%	9%	30%	29%	29%
2. Knowledge of the disaster preparedness plan	13%	8%	11%	7%	14%	11%	12%
3- Knowledge of the contents of the disaster preparedness plan	10%	6%	7%	6%	12%	8%	8%
4-Households meeting at least one of the three conditions above	31%	13%	29%	10%	29%	30%	30%
No. of households surveyed	**365**	**142**	**456**	**111**	**70**	**751**	**821**

In order to gain a more complete understanding of household attitudes and perceptions about disaster mitigation and preparedness, four questions were also included in the household questionnaire[19] both in the mid-term and final impact surveys:

1. To what degree do you think that you are better prepared for a future disaster?
2. What can you do to lessen the impacts of natural disasters?
3. In the event of a disaster, what can you do to protect both your family and yourself?
4. What must be done to assure that your family and community are prepared to face the next hurricane?

The responses to these questions are discussed below.

Increased awareness of disaster mitigation and preparedness will be evident by how well households are able to prepare for and their behaviors during an actual disaster in the future. The SECID mid-term and final impact surveys examined the perceived degree of household preparedness in the case of future natural disasters in HGRP-assisted communities with the question **"To what degree do you think that you are better prepared for a future disaster?"**

According to the final impact survey, 34% of sample households in HGRP-assisted communities responded that they were a little better prepared for natural disaster and 66% thought that they were not better prepared. The percentages are similar in both the hillside and irrigated plain agro-ecological zones and are depicted in Table 3.12. Compared to the mid-term impact survey results, these results show a big improvement in terms of household perception in the presence of natural disaster.

The final impact survey results revealed also that household perception in the presence of natural disaster varied according to the gender of household head. In fact, a large number of female headed households (80%) thought they were not better prepared for natural disaster while 65% of male headed households thought the same. Inversely, 35% of the male-headed households affirmed they were better prepared against 20% of female-headed households who had the same feeling.

[19] The complete questionnaire is attached in the Annex of this report.

Table 3.12 Household Perception of their Preparedness for Natural Disasters Mid-Term and Final Impact Survey.

	Agro-Ecological Zone				Gender		Total
	Hillside	Hillside – Control Group	Irrigated Plain	Irrigated Plain – Control Group	Women	Men	
To what degree do you think you are better prepared for natural disasters? Final Impact Survey 2001							
A little better prepared	37%	34%	30%	25%	20%	35%	34%
No better prepared	63%	66%	70%	75%	80%	65%	66%
Total	100%	100%	100%	100%	100%	100%	100%
No. of households surveyed	**369**	**140**	**455**	**110**	**66**	**758**	**824**
To what degree do you think you are better prepared for natural disasters? Mid term impact survey 2000							
A little better prepared	10%	3%	8%	9%	10%	9%	9%
No better prepared	90%	97%	92%	91%	90%	91%	91%
Total	100%	100%	100%	100%	100%	100%	100%
No. of households surveyed	**365**	**142**	**456**	**111**	**76**	**751**	**821**

Responses to the question, **"What can you do to prevent the impacts of natural disasters?"** reveal that household knowledge of actions required to lessen the impacts of disasters has progressed. 17% of households answered that there was nothing they could do in the case of a future disaster compared with 75% and 32% who responded this way during the baseline and the mid-term impact survey respectively. A significant number of households (21% in the HGRP assisted communities) believe that soil conservation and reforestation activities can help reduce the impacts of natural disasters. This can be explained by the fact that soil conservation is a well-known technique, which is generally associated with flood reduction and erosion control. 5% of households think that they will have to reinforce their house structurally to lessen the impact of a natural disaster. Removing trees and branches that could damage their homes constitutes another good prevention measure. The results varied according to head of household gender. A greater number of women (30%) believe that they can do nothing in the case of a natural disaster whereas only 16% of men shared the same opinion. Table 3.13 shows the entire list of responses grouped by agro-ecological zone and head of household gender.

Table 3.13 Household Responses regarding Methods for Lessening the Impacts of Natural Disasters – Final Impact Survey.

What can you do to lessen the impacts of natural disasters ?	Agro-Ecological Zone				Gender		Total
	Hillside	Hillside – Control Group	Irrigated Plain	Irrigated Plain – Control Group	Women	Men	
Nothing	14%	33%	20%	16%	30%	16%	17%
Soil conservation/reforestation	24%	15%	19%	19%	18%	21%	21%
Remove trees and branches that could damage the house	6%	8%	8%	1%	9%	7%	7%
Stock up on basic necessities	1%	6%	2%	2%	2%	2%	2%
Follow instructions heard on the radio	1%	0.7%	0.2%	0%	0%	1%	1%
Put animals in a shelter	0%	0%	0%	0%	0%	0%	0%
Avoid high risk zones	2%	2%	6%	2%	8%	4%	4%
Structurally reinforce your house	7%	4%	3%	4%	6%	4%	5%
Take shelter in a concrete or stronger house	2%	6%	2%	6%	2%	2%	2%
Drain and clear canals	1%	0%	3%	9%	2%	2%	2%
Construct an emergency shelter	0%	0%	0%	0%	0%	0%	0%
Soil conservation and others	8%	4%	8%	16%	5%	8%	8%
Tree pruning and others	27%	17%	20%	13%	14%	24%	23%
Combined actions	7%	4%	10%	13%	6%	9%	9%
Total	100%	100%	100%	100%	100%	100%	100%
No. of households surveyed	369	140	455	110	66%	758	824

In view of the mid-term impact and the baseline surveys, there has been considerable progress concerning the probable reaction of households in the case of a future disaster. Responding to the question, **"In the event of a disaster, what can you do to protect both your family and yourself?"** 13% of sampled households in HGRP-assisted communities said that there was nothing that could be done as compared with 45% and 22% of households responding this way during the baseline survey and the mid-term impact survey respectively. The data shows that about 87% of households anticipate taking appropriate actions in the case of a disaster, compared with only 55% prior to HGRP interventions. The two principal responses were: "flee your house and seek shelter elsewhere" (40%) and "stay at your house and take cover under a bed or table" (25%). The entire list of results is included in Table 3.14.

Table 3.14 Household Responses in the Event of a Future Disaster – Final Impact Survey.

In the event of a disaster, what can you do to protect both your family and yourself?	Agro-Ecological Zone				Gender		Total
	Hillside	Hillside – Control Group	Irrigated Plain	Irrigated Plain – Control Group	Women	Men	
Nothing	13%	17%	14%	8%	20%	13%	13%
Flee your house and seek refuge elsewhere	35%	33%	45%	61%	47%	40%	40%
Stay at your house and seek shelter under a bed or table	26%	31%	24%	19%	23%	25%	25%
Structurally reinforce your house	5%	3%	1%	1%	2%	3%	3%
Remove a section of the roof to let air pass through	1%	3%	1%	1%	0%	1%	1%
Seek refuge in secure place	1%	0%	0%	0%	0%	0%	0%
Shut the doors and secure your valuables	2%	1%	1%	2%	2%	2%	2%
Combined actions	11%	6%	6%	5%	5%	9%	9%
Don't get near trees or water and listen to the radio	3%	4%	5%	2%	3%	4%	4%
Flee your house and seek refuge in a secure place	2%	1%	2%	2%	0%	2%	2%
Structurally reinforce your house and seek refuge in a secure place	2%	1%	1%	0%	0%	1%	1%
Total	100%	100%	100%	100%	100%	100%	100%
No. of households surveyed	369	140	455	110	66	758	824

In order to be better prepared for the next hurricane, households mentioned that they must be better informed on the precautions to take. In response to the question, **"What must be done to assure that your family and community are prepared to face the next hurricane"?** household members cited the slowing of deforestation and soil conservation as important prevention measures for the next hurricane. Also, "building or relocating to an appropriate location" and "informing people on appropriate actions to be taken" were actions mentioned that would increase their security against future disasters (see Table 3.15 for complete details).

Table 3.15 Household Responses Concerning Disaster Mitigation and Preparedness – Final Impact Survey.

What must be done to assure that your family and community are prepared to face the next hurricane?	Agro-Ecological Zone				Gender		Total
	Hillside	Hillside – Control Group	Irrigated Plain	Irrigated Plain – Control Group	Women	Men	
Don't know	14%	26%	16%	7%	30%	14%	15%
Slow deforestation/practice soil conservation	29%	33%	35%	43%	26%	33%	32%
Build or relocate to an appropriate location	19%	19%	17%	16%	15%	18%	18%
Inform people on appropriate precautions	9%	6%	5%	4%	5%	7%	7%
Establish an emergency committee	1%	1%	2%	1%	0%	2%	1%
Build roads	1%	1%	1%	2%	0%	1%	1%
Other responses	2%	1%	2%	3%	5%	2%	2%
Combined actions	12%	5%	10%	8%	8%	11%	11%
Practice soil conservation and build a solid house	7%	1%	6%	8%	5%	7%	6%
Practice soil conservation and inform people on appropriate precautions	8%	6%	5%	8%	8%	6%	6%
Total	100%	100%	100%	100%	100%	100%	100%

In summary, households in HGRP-assisted communities are now much better informed. The data shows that there has been a concerted disaster mitigation and preparedness effort throughout the region, which reached HGRP-assisted communities and others.

3.5 GROSS AVERAGE ANNUAL HOUSEHOLD REVENUE

Results of the SECID final impact survey indicated that gross average annual household revenue was 20,585 gourdes for the 824 households investigated in HGRP-assisted communities. There is a 95% certainty that the true income average is between 18,461 gourdes and 22,709 gourdes. This represents a significant increase in income when comparing the last and mid-term impact surveys where the average income was 16,480 gourdes in the HGRP assisted area (see table 3.14).

The analysis of gross average annual household revenue by agro-ecological zone showed some slight variations. However, there was no statistically significant difference across agroecological zones in terms of revenue (table 3.15). In a given household, data showed that revenue varies according to its source. 47% of household revenue came from non agricultural activities, 34% from crop production, 7 % from fruit production and 2% from revenue provided directly by the HGRP (table 3.16).

Because households located in the hillside and irrigated plain control group communities were randomly selected in areas relatively near but not targeted by the HGRP, some control group household members were able to participate in HGRP activities by traveling to the demonstration and training sites. This participation brought in an average addition of 13 gourdes to households in the hillside control group and 309 gourdes to those in the irrigated plain control group. Please refer to Table 16 below for details on gross average annual household revenue and its distribution.

So, even though household revenue was higher in 2001, the increased observed could not be attributed to the HGRP impact. The data showed that household revenue varied slightly across agroecological zones and that there was no statistically significant difference between assisted and non-assisted communities.

Table 3.14: Gross Average Annual Household Revenue in Inflation-Adjusted Gourdes (US $ Equivalent) Comparing 2001 with 2000.

Revenue Source	Hillside Zone		Irrigated Plain Zone		Total Sample	
	Average Revenue 2001 Gourdes	Average Revenue 2000 Gourdes	Average Revenue 2001 Gourdes	Average Revenue 2000 Gourdes	Average Revenue 2001 Gourdes	Average Revenue 2000 Gourdes
Gross average annual household revenue	18,414 ***(US $ 767)***	12,354 ***(US$ 618)***	22,349 ***(US$ 931)***	14,630 ***(US$ 732)***	20,585 ***(US$ 858)***	13,481 ***(US$ 674)***
Standard deviation	33,397	11,174	27,804	13,754	30,483	12,452
Confidence interval – 5%						
Lower limit	14,396 ***($600)***	11,345 ***($567)***	19,639 ***($818)***	13,376 ***($669)***	18,461 ***($769)***	12,682 ***($634)***
Upper limit	21,892 ***($912)***	13,363 ***($736)***	24,959 ***($1,040)***	15,890 ***($795)***	22,709 ***($946)***	14,280 ***($714)***
No. Of households	369	365	455	456	824	821
Difference of means test results[20]					statistically significant difference	

[20] A paired sample T test was used to determine if there was a statistically significant difference between the means.

Table 3.15: Gross Average Annual Household Revenue[21] in Gourdes (US $ Equivalent)[22] according to Head of Household Gender by Agro-Ecological Zone and Difference of Means Test Results – Final-Impact Survey.

Head of Household Gender	Hillside Zone		Hillside Zone – Control Group		Irrigated Plain Zone		Irrigated Plain Zone – Control Group		Total Sample	
	Average revenue Gdes	No. of house holds	Average revenue Gdes	No. of house holds	Average revenue Gdes	No. of house holds	Average revenue Gdes	No. of house holds	Average revenue Gdes	No. of house holds
Women	8,713 ***(US $363)***	32	11,460 ***(US $478)***	18	16,638 ***(US $693)***	34	16,993 ***(US $708)***	6	12,808 ***(US $534)***	90
Men	19,335 ***($806)***	337	18,640 ***($777)***	122	22,811 ***($950)***	421	27,701 ***($1154)***	104	21,619 ***($901)***	964
Gross average annual household revenue	18,414 ***($767)***	369	17,717 ***($738)***	140	22,349 ***($931)***	455	27,117 ***($1,155)***	110	20,879 ***($870)***	1074
Standard deviation	33,397 ***(US $1,392)***		27,268 ***(US $1,136)***		27,804 ***(US $1,159)***		31,995 ***(US $1,333)***			
No. Of households	369		140		455		110			
Difference of means test results	No statistically significant difference				No statistically significant difference					

[21] The indicator refers to gross average annual household revenue from all identified sources **not** net income (revenue – expenses) and is not an indicator in USAID's Performance Monitoring Plan.
[22] The exchange rate of 24 gourdes = US $ 1was used for the final impact survey.

Table 3.16: Gross Average Annual Revenue by Household and Agro-Ecological Zone – Final Impact Survey.

Revenue Source	Hillside Zone		Hillside – Control Group		Irrigated Plain Zone		Irrigated Plain – Control Group		Total Sample	
	Average Gourdes	% of Revenue	Average Gourdes	% of Revenue	Average Gourdes	% of Revenue	Average Gourdes	% of Revenue	Average Gourdes	% of Revenue
Crop production	5,226	28%	7,702	43%	7,413	33%	11,153	41%	7,081	34%
Fruits	1,895	10%	1,134	6%	1,556	7%	711	3%	1,531	7%
Non-agricultural activities	9,186	50%	6,874	39%	11,019	50%	10,537	39%	9,800	47%
Direct HGRP revenue	526	3%	13	0.2%	362	2%	309	1%	368	2%
Sale of animals	1,423	8%	1,901	11%	1,612	7%	3,822	14%	1,811	9%
Animal products	62	0.4%	36	0.2%	176	0.4%	251	0.2%	126	0.5%
Land use fees	96	0.6%	56	0.6%	191	0.6%	334	0.8%	155	0.5%
Gross average annual household revenue	**18,414** ***($ 665)*** [23]	**100%**	**17,717** ***($ 588)***	**100%**	**22,349** ***($ 758)***	**100%**	**27,117** ***($ 751)***	**100%**	**20,880** ***($ 717)***	**100%**
Standard deviation	33,397		27,268		27,803		31,995		30,304	
Limit	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Confidence interval – 5% significance level	14,396	21,892	13,107	22,327	19,7390	24,959	21,015	33,219	19,030	22,730

[23] The exchange rate of 23 gourdes = 1 US $ was used for the mid-term impact survey.

ANNEX

USAID / PADF / SECID
ETUDE D'IMPACT AUPRES DES MENAGES
DANS LES ZONES TOUCHÉES PAR LE CYCLONE GEORGES

ENQUÊTE FORMELLE

QUESTIONNAIRE

Instructions pour les enquêteurs:

Introduisez-vous au menage et expliquez les objectifs de l'étude. L'étude doit fournir une base d'informations de référence. Ces informations vont d'abord servir à déterminer le niveau d'utilisation et l'impact des semences améliorées de ORE promues dans le cadre de ce programme et aussi apprécier le niveau d'information et de préparation des ménages pour pouvoir faire face à d'éventuels désastres naturels. L'enquête offre aussi une opportunité aux ménages de communiquer leurs points de vue et leurs préoccupations.

		Numéro de questionnaire	
Commune		Section communale	
Localité		Strate agro-écologique	

Enquêteur(s)		Date de l'interview	
Nom du chef de ménage		Sexe (cochez)	1.F / 2.M

Etes-vous bénéficiaire direct du programme de Cyclone Georges?

0. NSP	1. OUI	2. NON

Si oui, types de bénéfice?

Identité des membres du ménage interviewer (cette question est à remplir après l'administration du questionnaire).

Première personne:	2e personne:	3e personne:

Contrôlé par…….

Contrôle qualité (cochez)

Bien complété	Pas complété

Corrections à faire/données qui manquent: …….

I. RENSEIGNEMENTS DEMOGRAPHIQUES

ID	Liste des membres de ce ménage (incluant les dépendants qui ne demeurent pas ici) Commencez avec le plus vieux, suivi par le deuxième plus vieux etc.. jusqu'au plus jeune. NOM	RELATION 1= Epouse 2= Fils/fille 3= Père/mère 4= Oncle/tante 5=Autres parents 6=Autres	SEXE M=Masculin F=Féminin	AGE (à peu près)	NIVEAU D'EDUCATION 0= NSP 1= Analphabète 2= Primaire inachevée 3= Primaire achevée 4=Secondaire inachevée 5= Secondaire achevée 6= Universitaire 7=Centre d'alphabétisation	ENCORE A L'ÉCOLE 1= Oui 2= Non	STATUT MATRIMONIAL 0= NSP 1= Marié 2=Placé 3= Divorcé 4=Séparé 5= Célibataire 6= Veuf/Veuve	OCCUPATION PRINCIPALE 0= NSP 1= élève d'école 2= production agricole/élevage 3= ouvrier agricole 4= Artisanat 5= petits métiers 6= commerce de bois/de charbon 7= Commerce général 8= EMPLOYÉ (FONCTIONNAIRE ET CONTRACTUEL) 9= autres 10= aucun
10		Chef						
11								
12								
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II. AGRICULTURE ET ACCES A LA TERRE

EXPLOITATION AGRICOLE

# parcelle	Localisation	Tenure*	Surface totale CX	Surface travaillée CX	ID Personne responsable	Pente*	Type de structure de protection de sol*	Irrigation Oui/Non	Parcelles cédées (type de rente) 1=Nature 2=Espèce	Valeur de la rente Gdes
1.										
2.										
3.										
4.										
5.										
6.										
7.										

* Notes pour types de tenure: 1= Achetë, 2= Herité, 3= Indivise, 4= Pris en location, 5= Pris en métayage, 6= Jouissance, 7=Acheté et cédé, 8= Hérité et cédé

* Notes pour pente: 1= Faible, 2= Moyenne, 3= Forte

*** Notes pour type de structure de conservation de sol : 1= Canaux de contour, 2= Claiyonnage, 3= Murs secs, 4= Haies vives, 5= Rampes de paille, 6= Plates bandes suivant courbes de niveau, 7= Autre**

Commentaires:

III. INDICATEURS DE REVENUS

PRODUCTION TOTALE/12 DERNIERS MOIS

Superficie approximative	Produits	Quantité semée	Unité	Type de semence 1=Traditionnel 2=Améliorées ORE/PADF 3=Améliorées autres 4= Trad et amélio	Nombre de campagnes agricoles	Production totale/12 derniers mois	Unité	Prix unitaire Gdes	ID Personne générant le revenu
Parcelle 1									
Parcelle 2									
Parcelle 3									
Parcelle 4									
Parcelle 5									
Parcelle 6									
Parcelle 7									
Parcelle 8									
Parcelle 9									

IV. AFFECTATION DE LA PRODUCTION AGRICOLE

Espèces	Production totale	Unité	% Auto consommée	% Commercialisée	% Semences	% Stock et autres
Mais						
Haricot						
Sorgho						
Banane						
Oignons						
Tomates						
Carottes						
Choux						
Manioc						
Igname						
Betterave						
Patate						
Canne-a-sucre						
…….						
…….						
…….						

V. ESTIMATION 12 DERNIERS MOIS DE LA VALEUR DES FRUITS RÉCOLTÉS

Espèces	Quantité récoltée	Unité	Prix unitaire Gdes	Estimation 12 derniers mois de revenu	ID principal responsable de ce revenu
Noix de coco					
Arbre véritable					
Avocat					
Mangue					
Orange					
Chadèque					
Citron					
Mandarine					
Café					
Cacao					
Autre 1					

Autre 2					

VI. AUTRES ACTIVITÉS GÉNÉRATRICES DE REVENUS (12 DERNIERS MOIS)

A. Travail Non-Agricole Rénuméré

Activité rémunéré 12 derniers mois	ID de la personne générant ce revenu	Période de l'année	Fréquence ou quantité	Rémunération annuelle estimée Gdes
Travail agricole Salarié				
Revenu direct du programme de Cyclone Georges				
Artisanat				
Petits métiers				
Fonctionnaire ou emploi				
Vente de bois et de charbon				
Autres				

B. Commerce

Produits	Provenance	ID de la personne générant ce revenu	Période de l'année	Fréquence ou quantité	Rémunération annuelle Eetimée Gdes
Produits agricoles					
Produits non-agricoles					

C. Pêche

	Mois (Période)	Valeur moyenne des prises hebdomadaires	% Auto-consommé	Estimation de revenu pour la période	ID de la personne générant ce revenu
Bonne saison					
Saison morte					
Total pour les 12 derniers mois					

D. Revenu de l'émigration (12 derniers mois)

	ID de la personne bénéficiaire de ce revenu	Fréquence	Montant Gdes

Emigration saisonnière			
Emigration à long terme (y compris les transferts)			

VII. PRODUCTION ANIMALE, 12 DERNIERS MOIS

Animal	Nbre actuel	Nombre consommé	Nombre de morts	Nombre vendus	Montant des ventes Gdes	ID de la personne générant ce revenu
Bœuf						
Mouton						
Cabri						
Mule, cheval, âne						
Cochons						
Volailles						

VIII. PRODUITS ANIMAUX, 12 DERNIERS MOIS

TYPE	**Quantité récoltée**	**Unité**	**Quantité consommée**	**Quantité vendue**	**Autre quantité**	**Prix unitaire**	**ID de la personne générant ce revenu**
Lait							
Œufs							
Fromage							
Peau							
Miel							

IX. TECHNIQUES AGRICOLES

Indiquez les cultures que vous Plantez normalement (Si la liste n'est pas complète ajoutez des autres) (entourez si l'espèce est cultivée)		Quel type de SEMENCE utilisez-vous pour ces cultures ? (cochez une ou deux ou trois) Traditionnel	Amélioré ORE/PADF	Améliorié (autre)
Mais	1	0	1	2
Haricot	2	0	1	2
Sorgho	3	0	1	2
Banane	4	0	1	2
Oignons	5	0	1	2
Tomates	6	0	1	2
Carottes	7	0	1	2
Choux	8	0	1	2
Manioc	9	0	1	2
Igname	10	0	1	2
Betterave	11	0	1	2
Patate	12	0	1	2
Canne-à-sucre	13	0	1	2
Autre ……	14	0	1	2
Autre ……	15	0	1	2
Autre ……	16	0	1	2
Autre ……	17	0	1	2
Autre ……	18	0	1	2
Autre ……...	19	0	1	2

1. Question: Connaissez-vous les semences de ORE?

0. NSP	1. OUI	2. NON

2. Est-ce que c'est facile de trouver les semences de ORE/PADF?

0. NSP	1. OUI	2.NON

3. Utilisez-vous les semences de ORE?

0. NSP	1. OUI	2. NON

Si non, pourquoi?

X. GESTION DE LA FERTILITÉ DU SOL

Quelles techniques d'aménagement de fertilité de sol avez-vous l'habitude d'utiliser parmi les suivantes? (citez tous au paysan et entourez une réponse pour chaque technique)			
1. Jachère traditionnel	NSP	OUI	NON
2. Cendres	0	1	2
3. Fiente de poulets	0	1	2
4. Fumier acheté	0	1	2
5. Fumier de propre bétail	0	1	2
6. Engrais chimique	0	1	2
7. Engrais vert (légumineuses et autres) (ex. De haie vives)	0	1	2
8. Compostage de résidus et du fumier	0	1	2
9. Autres ……	0	1	2
Autres ……	0	1	2

1. Pendant les 12 derniers mois, avez-vous pratiqué l'agriculture sur brûlis (bruler toute la végétation afin de préparer les champs? (cochez une seule réponse)

0. NSP	1.Toujours	2. Parfois	3. Ne jamais

2. Est-ce que vous brûlez vos résidus de cultures (comme le maïs ou autres)? (cochez une seule réponse)

0. NSP	1. Toujours	2. Parfois	3. Ne jamais

XI. RESILIENCE/DESASTRES NATURELS

1. Connaissez-vous dans la localité un groupe ou comité qui aide les gens à se préparer pour faire face à un éventuel désastre naturel?

(cochez une réponse)

0. NSP	1. OUI	2. NON

Si oui, dans combien de rencontres avez-vous participé avec ce groupe?

2. Etes-vous au courant de l'existence d'un plan contre les désastres naturels dans votre communauté?

0. NSP	1. OUI	2. NON

Si oui, où peut-on le trouver ?

3. Etes-vous en mesure de nous dire ce qu'il y a dans ce plan ?

0. NSP	1. OUI	2. NON

4. Selon le plan, qu'est-ce que vous devez faire ?

5. Qu'est ce que vous pouvez faire pour prévenir l'impact des désastres naturels ?

6. Si par malheur un désastre naturel arrive, que feriez-vous pour protéger votre famille et vous-même ?

7. Dans quelle mesure, pensez-vous que vous êtes mieux préparer pour faire face aux futurs désastres?

8. D'après vous, qu'est ce qui devrait être fait pour s'assurer que votre famille et votre communauté soient prêtes à affronter un prochain cyclone?

EXPÉRIENCE DU MÉNAGE AVEC LES PROJETS DE DÉVELOPPEMENT

Avez-vous bénéficié d'un projet de développement?

0. NSP	1. OUI	2. NON

Si oui, remplissez le tableau suivant :

Projet	Type de bénéfice	Période approximative

L'entrevue est terminée. Remerciez le paysan/ la paysanne, et demandex s'il/ elle a des questions pour nous. Puis remplissez le tableau et partez.

A la fin de l'entrevue

Répondant était :	(entourez une)
0. Ne sais pas	0
1. Très coopérative et informative	1
2. Assez coopérative	2
3. Pas coopérative et informative	3

Commentaires de l'enquété:

…….